

DUm!HJ !A Uf_h']b`8 Yi hgW\ `UbX`&\$&' . GhUf_Yg`K UW\ ghi a `i bX`bYi Y`F Y_cfXY

9bhXYW_Yb`G]Y`X]Y`9f[YVb]ggY`XYf`U_hi Y`Yb`Ghi X]Y`XYg
J 5I B9H`ni f`9bhk]W_`i b[`XYg`DUm!HJ!`i bX`DU]X!J]XYc!cb!
8Ya UbX!A Uf_hYg`]b`8 Yi hgW\ `UbX" `9fZU\ fYb`G]Y`ž`k]Y`X]Y
I a gÄhnY`]a `š\`f`&\$&' `i a `; , ž `i `Ui Z) ž(`A]`)UfXYb`9i fc
[Ygh]Y[Yb`g]bX`i bX`k Y`W\Y`Dfc[bcgYb`Z0f`&\$&(`Yfk UfhYh
k YfXYb" `@YgYb`G]Y`ž`k]Y`g]W\`X]Y`5VcbbYbhYbnU\`Yb`]b`XYf
8 5 7 <!F Y[]cb`Ybhk]W_Y`b`i bX`k Y`W\Y`<YfUi gZcfXYfi b[Yb
X]Y`6fUbW\Y`a Y]ghYfb`a i ggž`i a `k Y]hYf\]b
k YhhVYk YfVgZÄ\][`ni `V`Y]VYb"



9]b`bYi Yf`F Y_cfX`Z0f`8 Yi hgW\ `UbX`]a `DUm!HJ !6YfY]W\`*8]Y
9]bbU\`a Yb`Z0f`DUm!HJ `i bX`VYnU\`hY`J]XYc!cb!8Ya UbX`gdfYb[Yb
X]Y`; fYbnYb`*`a `š\`f`&\$&' `gW\cggYb`X]Y`I a gÄhnY`Ui Z
i b[`Ui V`]W\Y`) ž(`A]`)UfXYb`9i fc`i bX`XUg`K UW\ ghi a `_Ybbh`_Y]b
9bXY`*9]b`k U\ fYg`6cca !š\`f`a]h`Y]bYa `VYY]bXfi W_YbXYb
Ni k UW\g`j cb`; , ž `DfcnYbh` `X]Y`XYi hgW\Y`A YX]Yb`UbXgW\UZh`]gh

Ui Z9fZc`[g_i fg`

5i W`Z0f`&\$&(`gWUi h`Yg[`ÄbnYbX`Ui g.`9l dYfhYb`XYg`J 5l B 9H
dfc[bcgh]n)YfYb`Y]bYb`k Y]hYfYb`5bgh]Y[`XYf`l a gÄhnY`i a `dYdd][Y
) `DfcnYbh`Ui Z]bg[YgUa`h) ž`A]``UfXYb`9i fc`8]Y`8 5 7<!F Y []cb`
XUg`g]bX`8 Yi hgW`UbXž`2 ghYffY]W`i bX`X]Y`XYi hgW`gdfUW`][Y
GW`k Y]n` ``Äggh`X]Y`? UggYb`Äi hYbž`XYbb`X]Y`9]bbU`a Yb
Xi fW`gW`fY]hYb`Yfgha`U`g`X]Y`a U[]gW`Y`A Uf`_Y`j cb`*`A]``UfXYb
9i fc`i bX`YffY]W`Yb`ja` ``YhhYb`ž\`f`*`ž`A]``UfXYb`9i fc`"GhUf`_Yf
K UW`ghi a g_i fg`Ui W` \]Yf.`&\$&(`gc`X]Y`8 5 7<!F Y []cb`[Uf`*`ž+
A]``UfXYb`9i fc`YffY]W`Yb`

5VcbbYa Ybhg`Ui Z`F Y`_cfX` \ Ò` \ Y`°

K Ug`Z0f`Y]b`5bghi fa` 8]Y`NU` \ `XYf`DUm!HJ!5VcbbYa Ybhg` \ Uh`]b
8 Yi hgW`UbX`ja` ž\`f`&\$&` `X]Y`%%ž&`A]``cbYb!A Uf`_Y`YffY]W`hž`XUg
g]bX`ØVYf`Y]bY`A]``cb`bYi Y`Ni gW`Ui Yf`8]Y`VY`]YVhYghYb
GYbXi b[Yb`nc[Yb`ja` [`Y]W`Yb`ž\`f`Xi fW`gW`b]h`]W`%` ž+
A]``cbYb`Ni gW`Ui Yf`Ub`i bX`X]Y`Ni _i bZ`ij Yfgdf]W`h`bcW`a Y`f.
&\$&(`k YfXYb`VYfY]hg`%%ž*`A]``cbYb`5VcbbYa Ybhg`dfc[bcgh]n)Yfh`
9]b`k Y]hYfYf`<cW`Ui Z`nY]W`bYh`g]W`ja` `6YfY]W`XYf`X][]hU`Yb
5Vfi ZX]YbghY`UV.`<]Yf`gdfYb[Yb`X]Y`5VcbbYa Ybhg`a]h`&%ž%
A]``cbYb`Yfgha`U`g`X]Y`&\$!A]``cbYb!A Uf`_Y`9]bY`NU` \ `ž`X]Y`&\$&(
Ui Z`&ž&`A]``cbYb`UbghY][Yb`gc`"8]Y`Ni gW`Ui Yf`g]bX` \i b[f][
bUW`i`ž\`U`hYb`°

: fUb`_`;]YfgVYf[ž; YgW`ÄZhgz0`fYf`XYg`J 5l B 9Hž`ghY`h`_`Uf.` ž
Y]bYa`A Uf`_hž`XYf`ja` a Yf`k YhhVYk YfVg]bhYbg]j Yf`k]fXž`]gh`XYf
: U`_hcf`J]Y`ZU`h`YbhgW`Y]XYbX`"K]f`a` ØggYb`XUfUi Z`UW`hYbž`XUgg
ni gÄhn`]W`Y`6Y`Ughi b[Yb`b]W`h`X]Y`5b[YVchgj]Y`ZU`h`[YZÄ`fXYb`"
<]YfVY]k]fX`XYf`8fi W`_b]W`h`k Yb][Yf.`8]Y`6fUbW`Y`a`i gg`g]W`
[Y[Yb`[fc»Y`HYW`bc`c[]Yd`Uhž`cfa` Yb`VY` \Ui`dhYb`°

žbcj Uh]cbYb`ja` `GhfYUa`]b[!6YfY]W`°

8]Y`GhfYUa`]b[!K Y`h`k]fX`ja` a Yf`XmbUa`]gW`Yf`i bX`8fUa` Uh]_
 \YffgW`h`]b`XYf`7cbhYbhl@UbXgW`UZ`i`G`_m`8Yi hgW`UbXž`i bhYf`XYf
@Y]hi b[]j`cb`9`_Y`K U`h`Y`a` ž`U[]Yfh`a`]h`]bbcj Uh]j`Yb`

@Ogi b[UbgÀhnYb`Xi fW`X]Y`D`UhhZcfa`G_miGhfYUa " I bgyf`N]Y`]gh
Ygž`XUg`[YgUa hY`9bhYfhU]ba Ybh`Ub`Y]bYa`Cfhini`j YfY]bYb`ž
Yf`_`Àfh`K U`h`Y`a`i`bX`nY][`h`XYb`K Y[`]b`Y]bY`_ca`d`YI YfYž`UVYf
Ui ZfY[YbXY`Ni`_i`bZh`Ui`Z`

5i W`DfcG]YVYbGUh"%/ æmb`ghYW`Yb`Yfj`cf.`B]Wc`Y`5[i Xc`6YfVY`
VYf]W`hYhj`cb`Y]bYa`gdfi`b[`UZhYb`K UW`ghi`a`XYf`Bi`hYfnU`Yb
i`a`i`)&`DfcnYbh`8]Y`5dd`k`jF`bi`b`]bhYbg]j Yf[Ybi`hnh`XYbb`Y`"A`]h
XYa`ghYh][`k`UW`gYbXYb`5b[YVchig]bX`X]Y`Bi`hYf`VYfY]hž`ZØf`a`Y`f
E`i`U`]h`h`ini`nU`Yb`9]b`K`Yh`Ui`Zi`a`X]Y`VYghYb`ϕ`U`hY`]b`j`c`Ya
; Ub[Y`

8Yf`GhfYUa`]b[!A Uf`_h`]gh`U`_hi`Y`"b`gY]bYf`gdUbbYbXghYb
9bhk`]W`_i`b[gd`UgY`ž`gU[h`<`Ybb]b[`B]Yg`cbmij`cb`F`H@
8Yi`hgW`UbX`"F`H@ž`VY[Y]ghYfh`a`]h`Y]bYa`Bi`hYffY`_cfX`j`cb`i`ž*
A`j`]cbYb`5Vcb`bYbhYb`]a`YfghYb`<`U`V`U`f`i`bX`U`h`g]W`XUa`]h
Y]bYb`XYf`j`cfXYfghYb`D`À`hY`]a`GhfYUa`]b[!C`ma`d`Yf`_Aa`d`Zh`

8]Y`NU`Yb`gdfYW`Yb`Y]bY`_`UfY`GdfUW`Y.`8Yi`hgW`UbX`]gh`Ui`Z
XYa`K`Y[ž`]b`XYf`K`Y`h`XYg`DU`m`HJ`i`bX`GhfYUa`]b[`ni`YfghfU`Yb`
a`Y`f`i`gYfgž`a`Y`f`9]bbU`a`Ybž`a`Y`f`?`cb`_i`ffYbn`8Yf
A`YX]Yb`_Ua`dZ`YbhZU`hYhg]W`i`bX`X]Y`Ni`gW`Ui`Yf`dfcZ]h]YfYb`j`cb
XYf`fUgUbhYb`9bhk`]W`_i`b[" `ϕ`X]YgYa`K`]fVY`k`]bX`XYf`NU`Yb
gc`Yb`k`Y]hYf`]b`_fYU]h]j`Y`@Ogi`b[Yb`Yfž`i`a`]b`XYf`6fUbW`Y`X]Y
B`UgY`j`cfb`ni`U`VYb`K`Ug`ZØf`gdUbbYbXY`NY]hYb`ZØf`X]Y
A`YX]Yb`UbXgW`UZh`

8YhU]`g

6Ygi W`Yb`G]Y`i`bg`Ui`Z.`a`Y]b!VYf`]b`b`Yh